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PATENT

Application # 10/666,227

Attorney Docket # 2002P15657US01 (1009-040)

AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for configuring HMI user screen navigation comprising the activities of:

providing an HMI screen navigation editor to a user;

via the HMI screen navigation editor, enabling the user to create a collection comprising a linked hierarchically organized plurality of HMI screen nodes;

responsive to a detected collision between a parent node of said linked hierarchically organized plurality of HMI screen nodes and a first child node of a plurality of child nodes of said parent node, automatically recursively adjusting a position of said parent node until an adjusted position of said parent node does not create, with respect to each child node of said plurality of child nodes, a determined collision with said child node, said determined collision determined based upon said adjusted position of said parent node and a calculated position of said child node; and

rendering the collection to the user.

2. (Original) The method of claim 1, further comprising:

receiving from the user a specification of an HMI root screen node.

3. (Original) The method of claim 1, further comprising:

receiving from the user a specification of an HMI child screen node, the HMI child screen node a descendent of an HMI root screen node.

4. (Original) The method of claim 1, further comprising:

receiving from the user, a specification of a relationship between two of the plurality of HMI screen nodes.

5. (Original) The method of claim 1, further comprising:

receiving from the user a specification of an organization of the collection.

6. (Original) The method of claim 1, further comprising:
receiving from the user a specification of a hierarchy of the collection.

7. (Previously Presented) The method of claim 1, further comprising:
automatically determining an arrangement of the collection.

8. (Original) The method of claim 1, further comprising:
receiving from the user a specification of a size the plurality of HMI screen nodes.

9. (Original) The method of claim 1, further comprising:
zooming a rendition of the plurality of HMI screen nodes.

10. (Original) The method of claim 1, further comprising:
panning a rendition of the plurality of HMI screen nodes.

11. (Original) The method of claim 1, further comprising:
collapsing a rendition of the plurality of HMI screen nodes.

12. (Original) The method of claim 1, further comprising:
expanding a rendition of the plurality of HMI screen nodes.

13. (Original) The method of claim 1, further comprising:
rotating a rendition of the plurality of HMI screen nodes.

14. (Previously Presented) The method of claim 1, further comprising:
rendering a portion of the plurality of HMI screen nodes.

15. (Original) The method of claim 1, further comprising:
enabling the user to revise the collection.

16. (Original) The method of claim 1, further comprising:
enabling the user to revise at least one of the plurality of HMI screen nodes.

17. (Original) The method of claim 1, further comprising:
receiving a user specification of an attribute of an HMI screen node.

18. (Original) The method of claim 1, further comprising:
receiving a user specification of an attribute of the collection.

19. (Previously Presented) The method of claim 1, further comprising:
receiving from the user a specification of a link between two HMI screen nodes.

20. (Previously Presented) The method of claim 1, further comprising:
receiving from the user a specification of a link from a first HMI screen node to a second HMI screen node, the second HMI screen node non-familial to the first HMI screen node.

21. (Original) The method of claim 1, further comprising:
rendering a link between two HMI screen nodes;

22. (Original) The method of claim 1, further comprising:
rendering a link from a first HMI screen node to a second HMI screen node, the second HMI screen node non-familial to the first HMI screen node.

23. (Previously Presented) The method of claim 1, further comprising:
receiving from the user a specification of a navigation control comprising at least one HMI screen link.

24. (Original) The method of claim 1, further comprising:

rendering a navigation control comprising at least one HMI screen link.

25. (Previously Presented) The method of claim 1, further comprising:

receiving from the user a specification of a navigation control comprising at least one button.

26. (Original) The method of claim 1, further comprising:

rendering a navigation control comprising at least one button.

27. (Previously Presented) The method of claim 1, further comprising:

receiving from the user a specification of a navigation control comprising at least one button, the at least one button comprising an HMI screen link.

28. (Original) The method of claim 1, further comprising:

rendering a navigation control comprising at least one button, the at least one button comprising an HMI screen link.

29. (Previously Presented) The method of claim 1, further comprising:

receiving from the user a specification of a navigation control comprising at least one button, the at least one button comprising an HMI screen link, the at least one button activatable via a user-specified soft key.

30. (Original) The method of claim 1, further comprising:

rendering a navigation control comprising at least one button, the at least one button comprising an HMI screen link, the at least one button activatable via a user-specified soft key.

31. (Previously Presented) The method of claim 1, further comprising:

receiving from the user a specification of a navigation control comprising at least one element activatable via a user-specified soft key.

32. (Original) The method of claim 1, further comprising:

rendering a navigation control comprising at least one element activatable via a user-specified soft key.

33. (Previously Presented) A machine-readable medium containing instructions for activities comprising:

providing an HMI screen navigation editor to a user;

via the HMI screen navigation editor, enabling the user to create a collection comprising a linked hierarchically organized plurality of HMI screen nodes;

responsive to a detected collision between a parent node of said linked hierarchically organized plurality of HMI screen nodes and a first child node of a plurality of child nodes of said parent node, automatically recursively adjusting a position of said parent node until an adjusted position of said parent node does not create, with respect to each child node of said plurality of child nodes, a determined collision with said child node, said determined collision determined based upon said adjusted position of said parent node and a calculated position of said child node; and

rendering the collection to the user.

34. (Previously Presented) A device for providing a representation of user screens for an HMI comprising:

an HMI screen navigation editor operatively adapted to:

enable a user to create a collection comprising a linked hierarchically organized plurality of HMI screen nodes;

responsive to a detected collision between a parent node of said linked hierarchically organized plurality of HMI screen nodes and a first child node of a plurality of child nodes of

said parent node, automatically recursively adjust a position of said parent node until an adjusted position of said parent node does not create, with respect to each child node of said plurality of child nodes, a determined collision with said child node, said determined collision determined based upon said adjusted position of said parent node and a calculated position of said child node; and

render the collection to the user.

35. (Previously Presented) The method of claim 1, further comprising:

receiving from the user, a user-drawn relationship indication line between two of the plurality of HMI screen nodes.

36. (Previously Presented) The method of claim 1, further comprising:

automatically determining an arrangement of the collection based upon a user specified upper limit on inter-generational spacing.

37. (Previously Presented) The method of claim 1, further comprising:

receiving a user specification of an attribute of an HMI screen node, the attribute adapted to change a background color of a screen.

38. (Previously Presented) The method of claim 1, further comprising:

rendering a navigation control comprising a button adapted to display a previously viewed screen in a sequence of screens.

39. (Previously Presented) The method of claim 1, further comprising:

rendering a navigation control comprising a button adapted to display a subsequent screen in a sequence of screens.

40. (Previously Presented) A method for configuring HMI user screen navigation comprising the activities of:

rendering a collection comprising a linked hierarchically organized plurality of HMI screen nodes to a user, said collection created via a provided HMI screen navigation editor, said HMI screen navigation editor adapted to, responsive to a detected collision between a parent node of said linked hierarchically organized plurality of HMI screen nodes and a child node of a plurality of child nodes of said parent node, automatically recursively adjust a position of said parent node until an adjusted position of said parent node does not create, with respect to each child node of said plurality of child nodes, a determined collision with said child node, said determined collision determined based upon said adjusted position of said parent node and a calculated position of said child node.